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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,135	11/19/2003	Rongxin Pan	USP2293C-DRSH	9079
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EXAMINER				
WALFORD, NATALIE K				
ART UNIT		PAPER NUMBER		
2879				
MAIL DATE		DELIVERY MODE		
03/26/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/718,135

**Applicant(s)**

PAN ET AL.

**Examiner**

NATALIE K. WALFORD

**Art Unit**

2879

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 31-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 31-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

The Amendment, filed on July 13, 2007, has been entered and acknowledged by the Examiner. Cancellation of claim 34 has been entered. Claims 31-33 are pending in the instant application.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skwirut et al. (US 4,300,073) in view of de Cort et al. (US 6,759,805).

Regarding claim 31, Skwirut discloses an illuminable unit (item 12) in figures 2 and 3, comprising: a light tube (item 14) having a spirally-shaped light body and two end portions downwardly, and integrally extended therefrom in a predetermined and curved manner (see FIG. 2), wherein said two end portions of said light tube are parallelly extended from said light body in said predetermined manner (see FIG. 2), wherein said light tube further has a light cavity containing a mercury source (column 6, lines 20-24) and being filled with inert gas (column 6, lines 24-26), and a phosphor layer coated on an inner wall of said light tube (column 5, lines 1-2 and column 6, lines 33-58); a conductor enclosure (items 33 or 34), which has a length approximately equal to a length of each said end portion of said light tube (see FIG. 2), wherein a

bottom end of said respective end portion is mounted and sealed to said conductor enclosure at a position that an upper head portion of said conductor enclosure is coaxially received within said respective end portion of said light tube to substantially reduce an overall height of said illuminable unit (see FIG. 2), wherein said conductor enclosure has an inner gas exhausting passage (items 39 or 40) communicating with said light cavity; a cathode terminal (items 35 or 36) which is strategically received in said spirally-shaped light body at a predetermined angle of inclination consistent with an angle of inclination of said spirally-shaped light body (see FIG. 2), wherein said cathode terminal supported in said light body to space apart from said conductor enclosure mounted at said bottom end of said respective end portion of said light tube; and a conductor wire (items 37 or 38) having a first section electrically extended from said cathode terminal along said spirally-shaped light body to said conductor enclosure at said corresponding end portion of said light tube (see FIG. 2), and a second section extended along said conductor enclosure for electrifying said mercury source, wherein said second section of said conductor wire is arranged to extend along a longitudinal direction of said corresponding end portion of said light tube within said conductor enclosure (see FIG. 2), in such a manner that an overall length of said conductor wire is maximized within a confined space of said light tube and said conductor enclosure, while minimizing an overall length of said vertically extending end portion of said light tube (see FIG. 2), so that said light tube is capable of effectively and efficiently generating illumination while keeping said light tube and said conductor enclosure compact (see FIG. 2), but does not expressly disclose that the conductor wire is inclined in a direction of the corresponding end portion of said light tube and that the spirally-shaped light body is inclined, as claimed by Applicant. De Cort is cited to show an illuminable unit in figure 1 with a conductor

wire (item 13) that is inclined in a direction of the corresponding end portion of a light tube (item 10) and a light body inclined (see FIG. 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the conductor wire inclined in a direction of the corresponding end portion of said light tube and that the spirally-shaped light body is inclined, since such a modification would have involved a mere change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art.

Regarding claim 33, Skwirut discloses the illuminable unit, as recited in claim 31, wherein said mercury source is amalgam contained in said light tube (column 6, lines 20-32).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Skwirut et al. (US 4,300,073) in view of Ge et al. (US 6,515,433).

Regarding claim 32, Skwirut discloses the illuminable unit, as recited in claim 31, but does not expressly disclose that said mercury source is liquid mercury contained in said light tube, as claimed by Applicant. Ge is cited to show an illuminable unit in figure 29 that contains

liquid mercury (column 16, lines 2-3). Ge teaches that liquid mercury, at higher temperatures, more mercury will vaporize (column 16, lines 3-4).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Skwirut's invention to include said mercury source is liquid mercury contained in said light tube as suggested by Ge for more mercury vaporizing.

### ***Response to Arguments***

Applicant's arguments with respect to claims 31-34 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalie K. Walford whose telephone number is (571)-272-6012. The examiner can normally be reached on Monday-Friday, 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571)-272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

nkW  
/Natalie K Walford/

Examiner, Art Unit 2879

/Sikha Roy/

Primary Examiner, Art Unit 2879